

# Configuration Management Monitoring and Oversight

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National Configuration Manager's Workshop  
Atlanta, GA  
September 2007



**Federal Aviation  
Administration**



# Overview

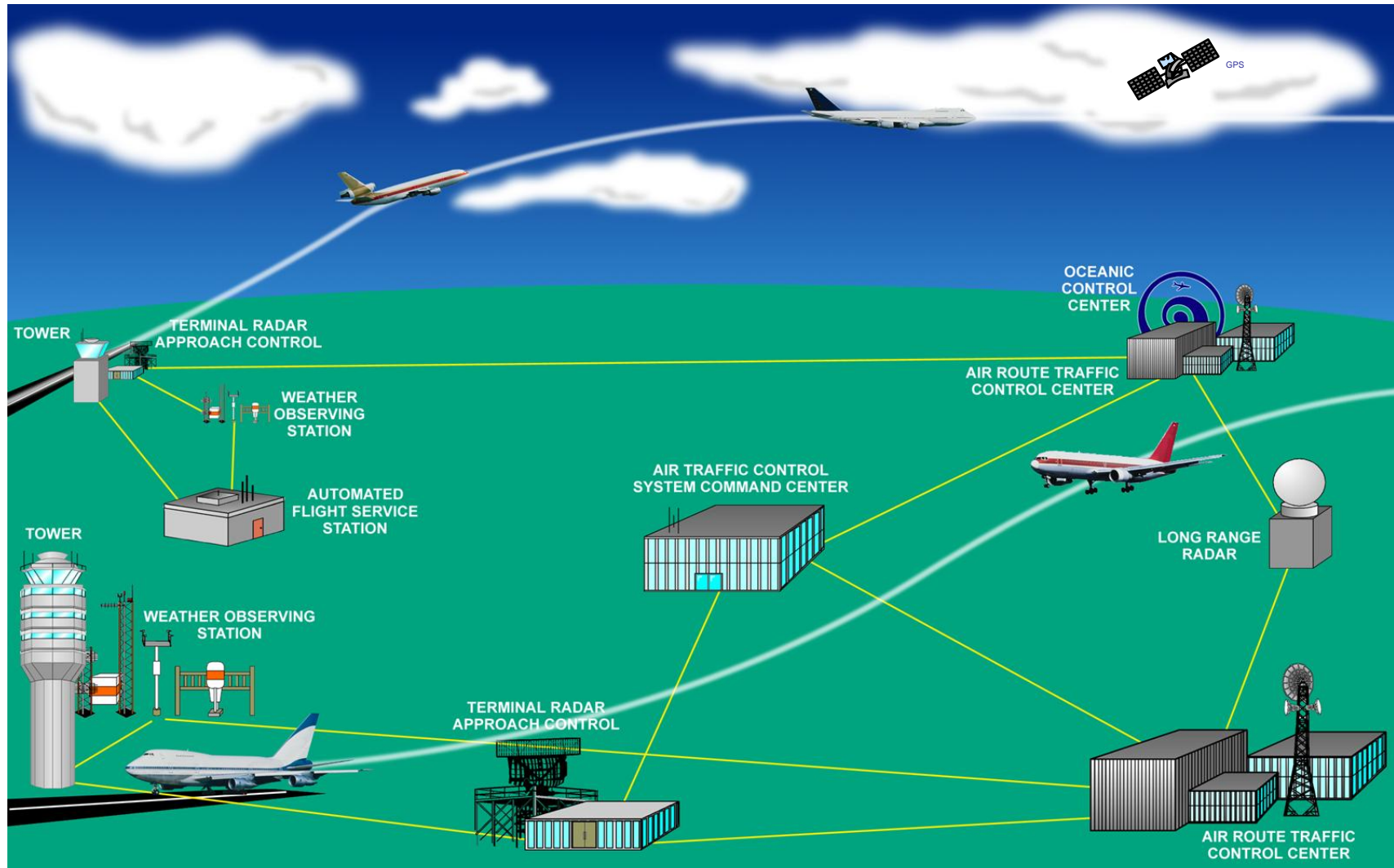
- **Background**
- **Monitoring & Oversight Benefits**
- **CM Status Review**
  - Active Baseline Documentation Status
  - Updates to the NAS Baseline (Documentation)
  - DCC Requests
  - Most Active CIs
  - Change Management Indicators
- **Observations and Concerns**
- **Ongoing and Future Activities**
- **Reminders**



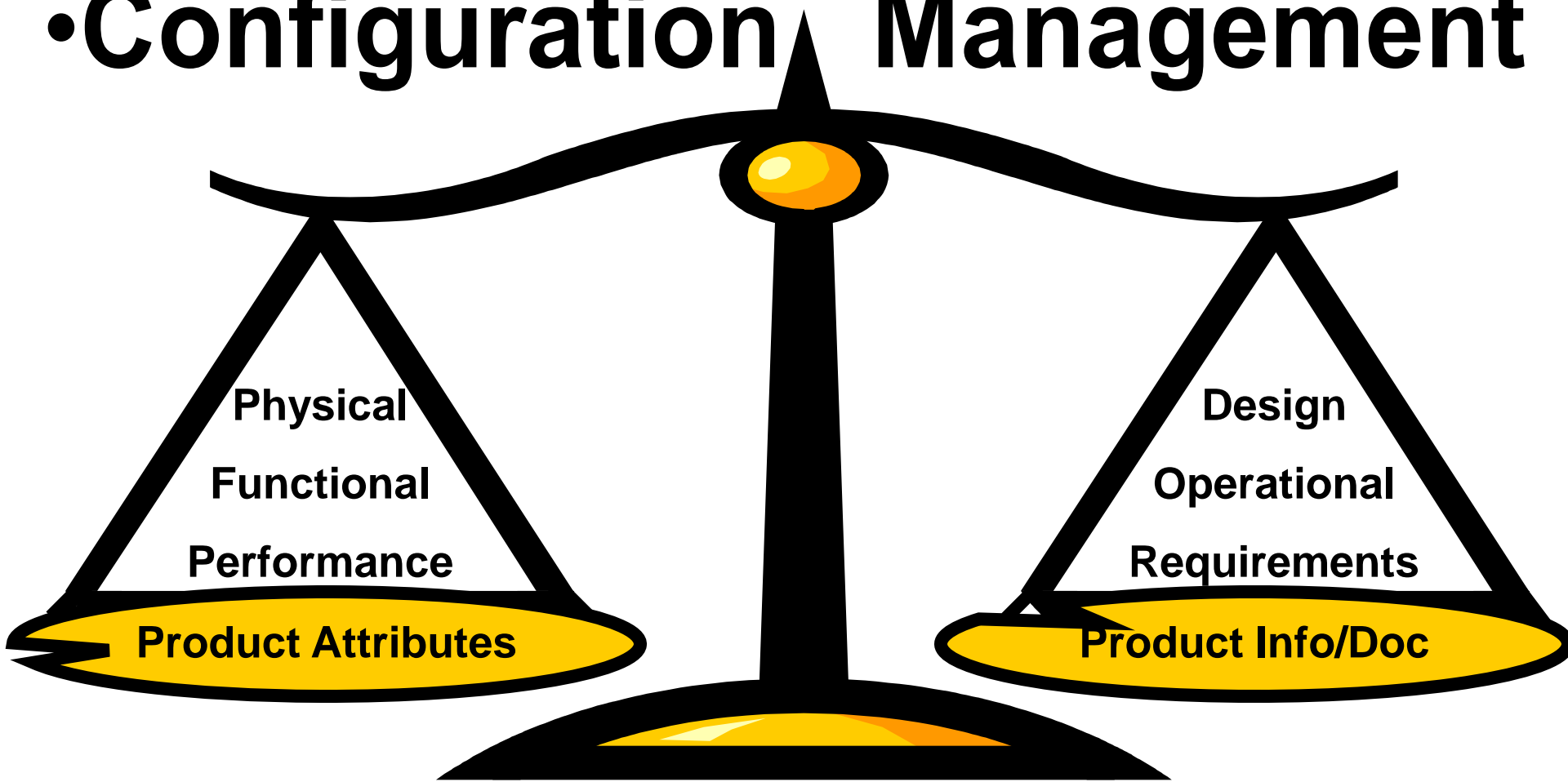
# Background

- ***Configuration Management is “a process for establishing and maintaining consistency of a product’s performance, functional and physical attributes with its requirements, design, and operational information throughout its life.” - MIL-HDBK-61***
- **Tenets of CM**
  - CM Planning and Management
  - Configuration Identification
  - Change Management
  - Configuration Status Accounting
  - Configuration Audits/Assessments

# National Airspace System



# • Configuration Management



## Tenets of Configuration Management

- ✓ CM Planning & Management
- ✓ Configuration Identification
- ✓ Change Management
- ✓ Configuration Status Accounting
- ✓ Configuration Audits/Assessments

# Background (cont.)

- **Monitoring**

- *Monitoring is the passive action of evaluating information to establish trends and identify areas of concern or model processes.*

- **Oversight**

- *Oversight is the collaborative action to ensure adherence to policy and procedure, including, but not limited to actions taken to address trends, areas of concern or process improvements.*

# Benefits of Monitoring & Oversight

## Formal Monitoring & Oversight Enables:

- Complete traceability of NAS requirements
- Baseline stability
- Identification of trends
- Continuous improvement of CM practices and automated support technology
- More Effective CM Processes
- Consultative support and training recommendations
- Constructive feedback for organizations
- Confirmation of CM approach
- Optimization of resources



# CM Status Review





# Active Baseline Documentation Status

- **IRDs: 116**
- **ICDs: 212**
- **SPEC: 771**
- **CPFS: 308**
- **TI: 1568**
- **FAA Standards: 39**
- **Product Baseline Listing Index (PBLI): 59**
- **Facility Baseline Drawings: 4771**
- **Other Active Baseline Documents: 4715**



# New Document Records Created Affecting the Following NAS Baselines:

	<i><b>2005</b></i>	<i><b>2006</b></i>	<i><b>8/2007</b></i>
<b>Requirement</b>	<b>6</b>	<b>14</b>	<b>14</b>
<b>Functional</b>	<b>48</b>	<b>54</b>	<b>33</b>
<b>Product</b>	<b>7</b>	<b>6</b>	<b>4</b>
<b>Operational</b>	<b>1136</b>	<b>820</b>	<b>228</b>

## Most Requested Documents (DCC Requests):

	<b><i>2005</i></b> <b>%</b>	<b><i>2006</i></b> <b>%</b>	<b><i>8/2007</i></b> <b>%</b>
<b>Case Files</b>	<b>5</b>	<b>25</b>	<b>35</b>
<b>SPECS (inc. CPFS)</b>	<b>28</b>	<b>22</b>	<b>25</b>
<b>IRD/ICDs</b>	<b>9</b>	<b>16</b>	<b>15</b>
<b>Orders</b>	<b>29</b>	<b>22</b>	<b>12</b>
<b>FAA Standards</b>	<b>8</b>	<b>8</b>	<b>6</b>
<b>TI/MTBK/EEM</b>	<b>14</b>	<b>5</b>	<b>3</b>
<b>Other (inc. DRWG)</b>	<b>7</b>	<b>2</b>	<b>4</b>

# Most Active CIs

	<b>CI (&gt;20 2005-2007 Initiated CFs):</b>
<b>ATO-E</b>	<b>ATOP; DARC; DSR; ECG; ERAM; HNL; MEART; WARP</b>
<b>ATO-T</b>	<b>AR3E; ARSR; ASDE-X; ASR-11; ASR-9; ATCBI; CARTS; FDIO; PRM; STARS; TDWR</b>
<b>ATO-R</b>	<b>ETMS; TMA</b>
<b>ATO-W</b>	<b>15GHZ; AFSS; ALSF2; ANICS; ARTCC; ATCT; BLD; CABLE; COM; ILS; LOC; MALSR; PAPI; POWER; ARSR-4 (primarily FDRW); TRACO</b>

# Most Active Cls

	<b>CI (2005-2007 Initiated CFs):</b>
<b>Top 10 Most Active Cls in WebCM (Initiated CFs): 34%</b>	<b>ATCT (162); BLD (94); ATOP (85); ASR-11 (76); ASDE-X (73); STARS (60); ARTCC (48); ANICS (47); ILS (47); POWER (47)</b>
<b>Top 6 Most Active Cls in WebCM (&gt;50 Initiated CFs): 26%</b>	<b>ATCT; BLD; ATOP; ASR-11; ASDE-X; STARS</b>

# Change Management Indicators

	<i>2005</i>	<i>2006</i>	<i>8/2007</i>
Approved Test	109	77	40
<b>NCP Average Age</b>	<b>88</b>	<b>73</b>	<b>125</b>
Approved Local	172	188	52
<b>NCP Average Age</b>	<b>66</b>	<b>83</b>	<b>87</b>
Approved National	276	263	173
<b>NCP Average Age</b>	<b>115</b>	<b>88</b>	<b>106</b>

# Change Management Indicators

	<i>2005</i>	<i>2006</i>	<i>8/2007</i>
<b>Case Files Initiated</b>	<b>1052</b>	<b>932</b>	<b>443</b>
<b>NCPs Assigned</b>	<b>699</b>	<b>642</b>	<b>366</b>
<b>CCDs Issued</b>	<b>659</b>	<b>630</b>	<b>323</b>
<b>CCDs Closed</b>	<b>442</b>	<b>1113</b>	<b>629</b>

# Change Management Indicators

	<i><b>2005</b></i>	<i><b>2006</b></i>	<i><b>8/2007</b></i>
<b>Average Processing from Case File to NCP Assignment</b>	<b>82</b>	<b>92</b>	<b>126</b>
<b>Average Age from NCP Assignment to Adjudication</b>	<b>136</b>	<b>74</b>	<b>94</b>
<b>Average Age from CCD Issuance to CCD Closure</b>	<b>557</b>	<b>1819</b>	<b>1373</b>



# Observations and Concerns



# Change Management Approvals

- **CCD Approved by CM Personnel or Non-Managers:  
598 signatures out of 1358 adjudicated CCDs**
  - 412 By CM/Coordinator/Specialist/Lead
  - 104 By Team Coordinator
  - 39 By Project Engineer
  - 29 By Program Analyst
  - 14 By Other (e.g. Mr., User)
- **Block 23 Casefiles Signed by Non-Supervisors:  
13.7% (276 out of 2018)**
  - 3 By Non-Fed
  - 51 By CM/Coordinator/Specialist/Lead
  - 222 By Other (e.g. Engineer, Planner, Mr., User, CCB Member/Must Evaluator, XXXXXXXXX)

# Case File Preparation & Processing

- 164 CIs had no CF activity for at least past 3 years
- Casefiles Originated by Contractors: 20%
- No FACID Designation (Test/Local): 80%
- Data Accuracy (e.g. Baseline Docs, CI Designators, FACID, Organization/Reviewer Traceability, etc.)
- Idle Casefile/NCPs (> 6 months): 73
- Significant CCD Closure (e.g. 41% Reduction in Open CCDs - DOCCON) Up from 27% in 2006
- WebCM security violations when users unavailable
- Very consistent Safety and Test Plan compliance
- CCD Action Statements (inconsistency, DCC actions not assigned)

# Configuration Identification

- **PBLI Inconsistency (format, content, numbering scheme, revisions)**
- **FAA STD-025 Compliance (i.e. Subsystem to Subsystem Interface Relationships)**
- **Verification of subsystem and component relationships in NAS-MD-001**
  - **Introduction of CIs and appropriate level within MCI Hierarchy**
- **CI establishment/alignment across processes (CM, FSEP, SSD)**

# Ongoing Activities

- **WebCM Support (PR Analyses, Requirements and Spec Reviews, OT&E)**
- **Compliance Monitoring (Safety, Test Plans)**
- **Monitoring of Non-Baselined System Activity (e.g. RIRP, GCNSS, ADS-B, AEFS)**
  - **Note: Las Vegas RID and STARS LITE (S-LITE) closed and FDP2000 is pending CCB Charter approval**
- **Monitor DCC Actions in WebCM and Baseline Documentation Follow-up**

# Future Activities

- **Central Service Area CM/CAEG Assessment**
- **CM Policy, Guidance, Training (Recommendations)**
- **CI Establishment / Consistency**
  - (CM, FSEP, SSD)
- **Minimize ProjectWise/NAS-MD-001 Gaps**
- **SSD Process Review (Links to CM Data)**
- **PBLI Practices Review**

# Reminders

- **Status Accounting Reports for Immediate Utility**
  - **Open NCPs**
  - **Open CCDs**
  - **“Idle” Case Files/NCPs**
  - **Withdrawn Case Files/NCPs**
  - **Closed CCD Actions**
  - **Open CCD Actions**
  - **Casefile/NCP/CCD**
  - **Safety and Test Plan Compliance Monitoring**
  - **NAS Baseline Updates**

[http://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/techops/cm/](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/cm/)

# Reminders (cont.)

- **Introduction of CIs & MCI Hierarchy:**
  - **Subsystem and Baseline Establishment/Maintenance**
    - Baseline Documentation
    - Hardware
    - Software
    - Firmware
  - **Review NAS-MD-001 on Regular Basis & Submit CFs as appropriate**
- **Ensure Appropriate DCC CCD Actions for Documentation Related NCPs**
- **Send Baseline Documents to DCC with Completed 1800-60 Form (Electronic Copy)**
- **DOCCON Access Required for Maintaining Pre-WebCM Configuration Status Accounting**